

## In the Claims

The following Listing of Claims replaces all prior versions in the application:

### LISTING OF CLAIMS

1. (Canceled)
2. (Currently amended) System according to claim 4~~8~~, in which the first and second mirrors (58, 60; 74, 76) have the same axis ( $X_1, X_2$ ), this same axis forming the optical axis of the system, and the respective focal points ( $F_1, F_2; F_3, F_4$ ) of the first and second mirrors are located on this optical axis.
3. (Currently amended) System according to claim 2~~4~~, in which the respective focal points ( $F_1, F_2; F_3, F_4$ ) of the first and second mirrors are distinct.
4. (Currently amended) Optical light collection system, this system being intended to collect light emitted by at least one light source and to focus the collected light onto at least one light detection device, this system being characterized in that it comprises at least two mirrors, namely a first mirror and a second mirror, and in that the source is a luminescent discharge lamp, the first mirror being capable of collecting light emitted by the light source and making the collected light converge onto the second mirror, this second mirror being capable of making the light that it receives from the first mirror converge onto the light detection device, this system thus amplifying the light flux, being achromatic and having a low absorption for light, including for the ultraviolet radiation, and in that the system is provided with:
  - a chamber that is opaque to all light, including ultraviolet radiation, and in which the light source, the light detection device and the mirrors are placed, and
  - means of creating a vacuum in this chamber or filling it with a gas that is transparent to ultraviolet radiationSystem according to claim 2,
  - wherein the first and second mirrors have the same axis, this same axis forming the optical axis of the system, and the respective focal points of the first and second mirrors are located on this optical axis, and

~~wherein in which~~ the first mirror comprises a central drilling (64, 80) that is capable of allowing light focused by the second mirror to pass towards the light detection device.

5. (Canceled)

6. (Currently amended) System according to claim 4, in which each of the first and second mirrors (58, 74, 88; 60, 76, 90) is chosen from among spherical mirrors, parabolic mirrors and ellipsoidal mirrors.

7. (Currently amended) System according to claim 4, in which each of the first and second mirrors (58, 74, 88; 60, 76, 90) is covered by a metallic or chemical deposit.

8. (Currently amended) Optical light collection system, this system being intended to collect light emitted by at least one light source and to focus the collected light onto at least one light detection device, this system being characterized in that it comprises at least two mirrors, namely a first mirror and a second mirror, and in that the source is a luminescent discharge lamp, the first mirror being capable of collecting light emitted by the light source and making the collected light converge onto the second mirror, this second mirror being capable of making the light that it receives from the first mirror converge onto the light detection device, this system thus amplifying the light flux, being achromatic and having a low absorption for light, including for the ultraviolet radiation, and in that the system is provided with:

-a chamber that is opaque to all light, including ultraviolet radiation, and in which the light source, the light detection device and the mirrors are placed, and

-means of creating a vacuum in this chamber or filling it with a gas that is transparent to ultraviolet radiation~~System according to claim 4,~~

~~in which wherein~~ the light detection device comprises an entry slit (56, 72, 86, 110) and the second mirror is designed to focus the light that it receives from the first mirror on this entry slit.

9. (Currently amended) Optical light collection system, this system being intended to collect light emitted by at least one light source and to focus the collected light onto at least one

light detection device, this system being characterized in that it comprises at least two mirrors, namely a first mirror and a second mirror, and in that the source is a luminescent discharge lamp, the first mirror being capable of collecting light emitted by the light source and making the collected light converge onto the second mirror, this second mirror being capable of making the light that it receives from the first mirror converge onto the light detection device, this system thus amplifying the light flux, being achromatic and having a low absorption for light, including for the ultraviolet radiation, and in that the system is provided with:

\_\_\_\_\_ -a chamber that is opaque to all light, including ultraviolet radiation, and in which the light source, the light detection device and the mirrors are placed, and

\_\_\_\_\_ -means of creating a vacuum in this chamber or filling it with a gas that is transparent to ultraviolet radiation~~System according to claim 1,~~

\_\_\_\_\_ in which~~wherein~~ the light detection device is an optical spectrometric analysis device (96) comprising an entry slit and the second mirror is designed to focus light that it receives from the first mirror on this entry slit.

10. (Currently amended) System according to claim ~~4~~4, in which light emitted by the light source contains one or more ultraviolet components.

11. (Currently amended) Optical light collection system, this system being intended to collect light emitted by at least one light source and to focus the collected light onto at least one light detection device, this system being characterized in that it comprises at least two mirrors, namely a first mirror and a second mirror, and in that the source is a luminescent discharge lamp, the first mirror being capable of collecting light emitted by the light source and making the collected light converge onto the second mirror, this second mirror being capable of making the light that it receives from the first mirror converge onto the light detection device, this system thus amplifying the light flux, being achromatic and having a low absorption for light, including for the ultraviolet radiation, and in that the system is provided with:

\_\_\_\_\_ -a chamber that is opaque to all light, including ultraviolet radiation, and in which the light source, the light detection device and the mirrors are placed, and

\_\_\_\_\_ -means of creating a vacuum in this chamber or filling it with a gas that is transparent to ultraviolet radiation~~A system according to claim 1,~~

further comprising at least one other mirror via which light coming from the second mirror is sent to the light detection device.

12. (Currently amended) Optical light collection system, this system (~~50, 66, 80~~) being intended to collect light emitted by at least one light source (~~52, 68, 82, 94, 102~~) and to focus the collected light onto at least one light detection device (~~54, 70, 84, 96, 106~~), this system being characterized in that it comprises at least two mirrors, namely a first mirror and a second mirror, the first mirror being larger than the second mirror, and in that the source is a luminescent discharge lamp, the first mirror (~~58, 74, 88~~) being capable of collecting light emitted by the light source and making the collected light converge onto the second mirror, this second mirror (~~60, 76, 90~~) being capable of making the light that it receives from the first mirror converge onto the light detection device, this system thus amplifying the light flux, being achromatic and having a low absorption for light, including for the ultraviolet radiation, and in that the system is provided with:

- a chamber that is opaque to all light, including ultraviolet radiation, and in which the light source, the light detection device and the mirrors are placed, and

- means of creating a vacuum in this chamber or filling it with a gas that is transparent to ultraviolet radiation.